

Work Order ID 121920

Monday, July 07, 2014 9:49:36 AM

121920

Page 1

Item ID: D3373-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Cam Lock

Stop ***NS2***

Start Date: 7/07/14

Start Qty: 20.00

20

Cust Item ID:

Required Date: 7/07/14

Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan: MLSDate: 4-07-07

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3373

Rev A

100

0.00

100

Purchasing

PURCHASING

Memo

0.00

Purchasing

Issue P/O: 24913 For D3373-1 Keyed Unalike P/N:1770A51 or
Alike P/N: 1770A525 Possible Supplier: McMasterConformation of Parts
Specification sheet is requiredCL 4/07/08 20

110

0.00

110

Packaging

Receive & Inspect for Damage & Mat'l Certs

Memo

0.00

Packaging

Ensure Conformation of Parts Specification sheet is attached

P 4/7/10 (20)

120

0.00

120

QC

QC6- Inspect dimensions to drawing

Memo

0.00

Quality Control

DAS

27

9/39

14/7/1020

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 121920

Monday, July 07, 2014 9:49:36 AM

121920

Page 2

Item ID: D3373-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Cam Lock

Stop

NS2

Start Date: 7/07/14

Start Qty: 20.00

20

Cust Item ID:

Required Date: 7/07/14

Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

130

Packaging

Packaging

0.00

Memo

0.00

Identify and Stock Identify Keyed Unlike as: D3373-1D Identify Keyed
Alike as: D3373-1KA

5T035

20X

DAS
28
9-89

JUL 10 2014

140

140

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

MCS

14-07-14

MCS 14-07-11

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Picklist Print

Monday, July 07, 2014 9:49:36 AM

Page 1

Work Order ID: 121920

121920

Parent Item: D3373-1

D3373-1

Parent Item Name: Cam Lock

Start Date: 7/07/14

Required Date: 7/07/14

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP A05.01.05New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3373-1P		Purchased	No			110	Each	0.0000	1	20			

D3373-1P

Cam Lock

P. 4/17/14 (20)

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td style="width: 33%;"> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </td> <td style="width: 33%;"> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </td> <td style="width: 33%;"> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </td> <td style="width: 33%;"> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </td> </tr> </table>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

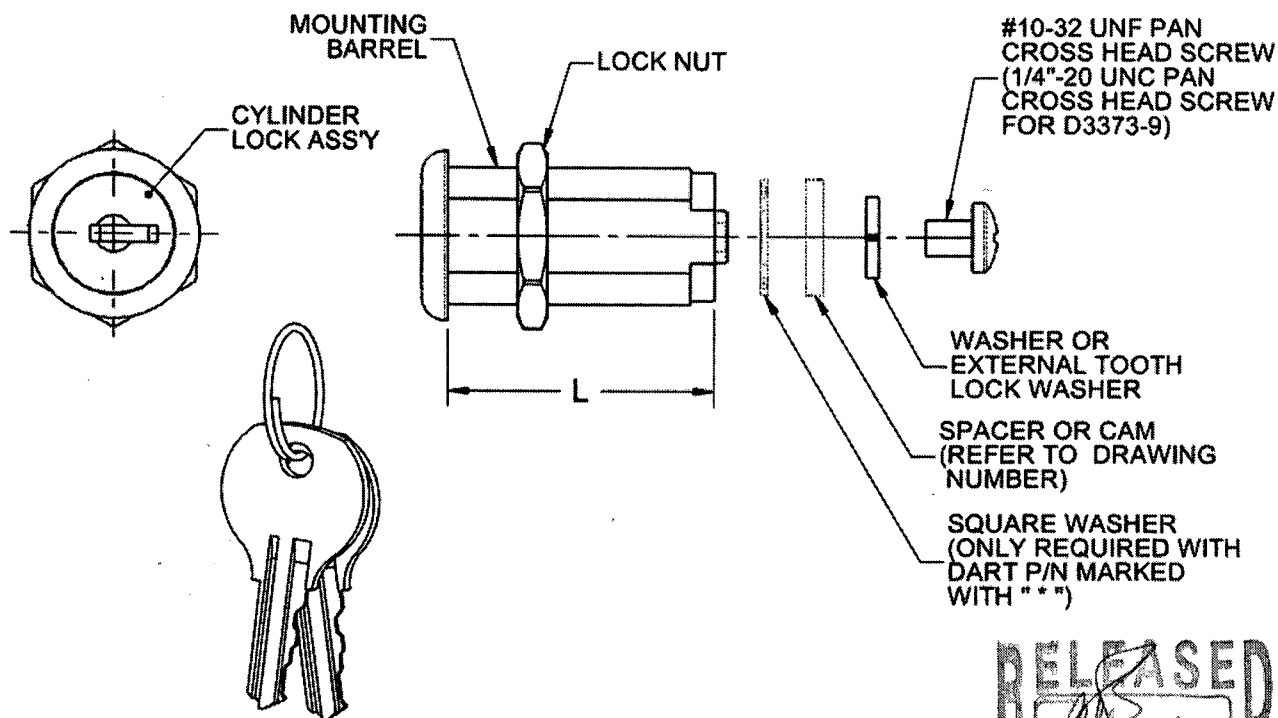
FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3373	REV. A SHEET 1 OF 1
DATE 04.12.10		TITLE CAM LOCKS	SCALE 1:1
A	04.12.10	NEW ISSUE	

SPECIFICATION CONTROL DRAWING



RELEASED
[Signature]
05/02/11

DART P/N	SUPPLIERS McMASTER OR IDN CANADA P/N	L (in)	REPLACEMENT KEY DART P/N	SPACER/CAM DRAWING NUMBER
D3373-1	1770A51	0.425	D3373-1K-XXXXX	D3369-5
D3373-3	1770A54	0.935	D3373-3K-XXXXX	D3369-5
D3373-5	1770A41	1.435	D3373-5K-XXXXX	D3370-5
D3373-7*	1770A71	1.715	D3373-7K-XXXXX	D3371-5
D3373-9*	35803 ILCO	0.595	D3373-9K-1866-13	D3372-11

To order replacement keys from McMaster, order 1770A2 and specify key number where "XXXXX" represents key number for 3/4" diameter lock.
Eg: D3373-1K-C377A, oder P/N 1770A2-C377A.

NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 12192045
1-09-07

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO24913**

Purchase Order Date 7/8/2014

PO Print Date 7/8/2014

Page Number 2 of 6

Order From :

VU-MCM001

Ship To : DART AEROSPACE LTD

MCMaster-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 330 995 5500

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 10

Currency USD

FOB FCA - (Free Carrier)

Ship To Contact

Ship To Phone

Ship Via: Purolator ground ppd

Ship Acct:

3	D3373-1P	Cam Lock	7/11/2014	20.00	\$6.08	\$121.60
---	----------	----------	-----------	-------	--------	----------

Yes Each

7/11/2014

AS PER DWG D3373 REV. A
B121920

MCMaster P/N: 1770A525 KEYED ALIKE

Line Total: \$121.60

4	71500-30	9464K12 O RING	7/11/2014	1.00	\$4.62	\$4.62
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No Each

7/11/2014

Line Total: \$4.62

Deliver To: J-LUC

5	71500-30	9464K351 O RING	7/11/2014	1.00	\$4.41	\$4.41
---	----------	-----------------	-----------	------	--------	--------

No Each

7/11/2014

Line Total: \$4.41

Deliver To: J-LUC

Note:

7/8/2014



200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO24913

Page 1 of 2

Order Placed By
Chantal Laviole

07/08/2014

McMaster-Carr Number
6052189-02

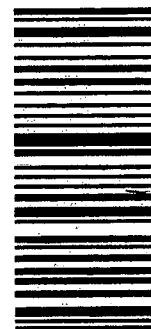
Line	Description	Ordered	Shipped	LNS	A82
2	9610K18 Military Specification Grommet Kit, with Teeth Washer, Trade Size 2, 3/8" ID, 24 Grommets Your Part Number: B121971	4 Each	4	1 - 315 - 09	43 - 34 K18 4EA 2
1	9610K17 Military Specification Grommet Kit, with Teeth Washer, Trade Size 1, 5/16" ID, 48 Grommets Your Part Number: B121958	4 Each	4	1 - 313 - 03	01 - 02 K17 4EA 1
3	1770A525 Cam Lock with Polished Nickel Finish, Keyed to C420A, 3/4" Diameter Hole, 7/64" Material Thickness Your Part Number: D3373-1P	20 Each	20 DAS 27 9-22 147110	1 - 698	3
4	9464K12 Viton(R) Fluoroelastomer O-Ring, AS568A Dash Number 007, Packs of 100 Your Part Number: 71500-30	1 Pack	1	3 - 708	4
5	9464K351 Viton(R) Fluoroelastomer O-Ring, AS568A Dash Number 035, Packs of 10 Your Part Number: 71500-30	1 Pack	1	3 - 707	5
8	2573A677 Hex Die for Thread Repair, 18 X 1.5 mm Thread Size Your Part Number: 71500-30	1 Each	1	2 - 510	8

Dart Aerospace Ltd

EXP
HZ-D

Me

17x17x8



27 lbs
12 lines

FW1BSP21
07/08/2014
14:02/14:32
413
Cycle 51

